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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/719,341	09/25/1996	SEETHARAMAIAH MANNAVA	13DV-12522	9351
27622	7590	08/11/2005		
STEVEN J. ROSEN 4729 CORNELL ROAD CINCINNATI, OH 45241			EXAMINER VERDIER, CHRISTOPHER M	
			ART UNIT 3745	PAPER NUMBER
DATE MAILED: 08/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary

Application No.

08/719,341

Applicant(s)

MANNAVA ET AL.

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7-28-05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 1995 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on July 28, 2005 has been entered.

Applicants' statement that the present invention and the Mannava 5,591,009 reference were commonly owned at the time the claimed invention was made and was subject to an obligation of assignment that would establish common ownership is noted and appreciated. Applicants have argued that this statement disqualifies Mannava '009 as prior art under 35 USC 103(c). This argument is not persuasive, because the effective filing date of the instant application is March 6, 1995, which is before the critical date of November 29, 1999 as set forth in MPEP 706.02(I)(1). The amendment to 35 USC 103(c) does not affect any application filed before November 29, 1999, including a request for continued examination under 37 CFR 1.114 of such an application. The examiner suggests that Applicant file a continuation under 37 CFR 1.53(b) and include the above statement of common ownership in order to remove Mannava '009 as a reference.

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Terminal Disclaimer

The terminal disclaimer filed on July 11, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 5,591,009 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mannava '009 in view of Neal and Mallozzi 3,850,698. Mannava '009 discloses a repaired laser shock peened gas turbine engine component 8 substantially as claimed, including a metallic

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airfoil/blade 34 having a leading edge LE and a trailing edge TE and a pressure side 46 and a suction side 48, at least a first laser shock peened surface 54 on a first side of said airfoil, said laser shock peened surface extending radially along at least a portion of said leading edge and extending chordwise from said leading edge, and a first region 56 having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said laser shock peened surface wherein said deep compressive residual stresses are formed, with said first laser shock peened surface located along said pressure side 46 of said leading edge, a second laser shock peened surface 54 located along said suction side 48 of said leading edge and extending radially along at least a portion of said leading edge and extending chordwise from said leading edge, and a second region 56 having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said second laser shock peened surface wherein said deep compressive residual stresses are formed, wherein said laser shock peened regions extending into said airfoil from said laser shock peened surfaces are formed by simultaneously laser shock peening both sides of said airfoil, and third and fourth laser shock peened surfaces 54, 54 extending radially at least along a portion of said trailing edge and extending chordwise from said trailing edge on said pressure and suction sides respectively of said airfoil, a third laser shock peened region 56 having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said third laser shock peened surface, and a fourth laser shock peened region 56 having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said fourth laser shock peened surface, with the third and fourth laser shock peened regions extending into the

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airfoil from the laser shock peened surfaces being formed by simultaneously laser shock peening both sides of the trailing edge of the airfoil.

However, Mannava does not disclose that the component is a compressor blade, and does not disclose that the laser shock peening spots are at a power density of 100-200 Joules per square centimeter.

Neal (column 2, lines 65-68) teaches compressor blades may be peened for the purpose of reducing compressor blade fatigue.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the repaired laser shock peened gas turbine engine component of Mannava for the compressor blades as taught by Neal for the purpose of reducing compressor blade fatigue.

Mallozzi '698 (figure 1 and column 5, lines 23-26) teaches that laser shock peening of a surface may occur at a power density of between 10 to 10,000 Joules per square centimeter, for the purpose of improving hardness and strength.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to perform the laser shock peening at a power density of 100-200 Joules

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per square centimeter, as taught by Mallozzi '698, for the purpose of improving hardness and strength.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

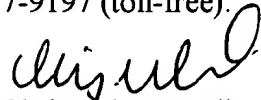
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
August 8, 2005


Christopher Verdier
Primary Examiner
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